Claims

[1]	A method for constituting a layered cell, which is for constituting a cell in an
	OFDMA (Orthogonal Frequency Division Multiple Access) mobile com-
	munication system, the method comprising:
	(a) dividing L carriers having orthogonality into M sub-channels;
	(b) dividing the carriers into N groups each having the M sub-channels;
	(c) grouping the N groups by an arbitrary integer into K classes; and
	(d) constituting a plurality of layered cells corresponding to the K classes.
[2]	A method for constituting a layered cell, which is for constituting a cell in an
	OFDMA mobile communication system, the method comprising:
	(a) dividing L carriers having orthogonality into M sub-channels;
	(b) dividing the carriers into N groups each having the M sub-channels;
	(c) grouping the N groups by an arbitrary integer into K classes; and
	(d) constituting a plurality of layered cells corresponding to the K classes.
[3]	The method as claimed in claim 1 or 2, wherein in the step (c), the respective K
	classes include the same or a different number of groups.
[4]	The method as claimed in claim 3, wherein the step (c) comprises: sequentially
	allocating the groups to each of the K classes, and allocating the (nK+k)-th group
	to the k-th class, when the respective K classes include the same number of
	groups.
[5]	The method as claimed in claim 3, wherein the step (c) comprises: arbitrarily
	allocating the respective N groups to each of the classes, when the respective K
	classes include a different number of groups.
[6]	The method as claimed in claim 1 or 2, wherein the plural layered cells of the
	step (d) includes sector layers comprising a plurality of sectors classified by
	wireless areas, and a cell layer comprising a single cell corresponding to an
	overall cell area.
[7]	The method as claimed in claim 6, wherein the step (d) comprises:
	(d-1) allocating a capacity by sectors classified by wireless areas to map the
	classes to capacity;
	(d-2) generating the classes by as many as the number of sectors; and
	(d-3) allocating each class by sectors to constitute the sectors.
[8]	The method as claimed in claim 6, wherein the step (d) comprises:
	(d-1) grouping the classes in a number of the sectors plus one;

	(d-2) allocating each class to a sector area; and
	(d-3) allocating the remaining class to a cell including the cell area.
[9]	The method as claimed in claim 6, wherein the step (d) comprises:
	(d-1) grouping the N groups into two classes;
	(d-2) allocating one class to the sector layers to allocate wireless resources for
	the classes equal in number to the sectors; and
	(d-3) allocating the other class to the cell layer.
[10]	The method as claimed in claim 9, wherein the step (d-2) comprises: using a
	channel encoding technique and a forward error compensation method for data
	transmission when a collision occurs at a boundary of the sectors.
[11]	The method as claimed in claim 9, wherein the step (d-3) comprises: allocating
	wireless resources equally throughout the area of the cell layer to constitute a
	layered cell structure.
[12]	The method as claimed in claim 6, wherein the sector layers allow a use of
	wireless resources for a user having a low movement speed, the cell layer
	allowing a use of wireless resources for a user having a high movement speed.
[13]	The method as claimed in claim 6, wherein the sector layers allow a use of
	wireless resources for a service having a low priority, the cell layer allowing a
	use of wireless resources for a service having a high priority.
[14]	The method as claimed in claim 6, wherein the sector layers allocate resources of
	the cell layer to a user requiring a high data rate in the vicinity of a sector
	boundary to allow a selection of AMC (Adaptive Modulation Coding) for high-
	speed data transmission.